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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/564,109

08/21/2006

Pascal Fourcade

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EXAMINER

LENIHAN, JEFFREY S

ART UNIT

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1796

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/564,109	Applicant(s) FOURCADE, PASCAL	
	Examiner Jeffrey Lenihan	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08/21/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:
2. Line ¶0035 reads "from 10% to 90% by weight of a mPE and."

Appropriate correction is required.

3. The use of the trademarks K RESIN ®, STYROLUX ®, and FINACLEAR ® has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 17-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 17, and by extension dependent claims 18-25, recites that the polymer composition of claim 16, which has been formed into a peelable film, further comprises a container suitable for packaging food. The examiner takes the position that a composition of matter in the form of a film cannot comprise a container, thus rendering the claims indefinite.

6. Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The instant claim recites a film which "contains said styrene-butadiene block copolymer in an amount of at least 50 wt. % of said styrene-butadiene block copolymer." Based on the language of the parent claim, the examiner interprets this claim to require that the peelable film comprises at least 50% by weight of the styrene-butadiene block copolymer.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 8-20, and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii et al, WO 01/15897 in view of Marechal, EP1312624 and the K

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RESIN ® DK11 product data sheet, published by Chevron Phillips Chemical Company in January 2001.

10. The instant claims are directed to a polymer composition comprising 10-90% by weight of a metallocene-catalyzed ethylene polymer and 10-90% by weight of a styrene-butadiene block copolymer having from 5-40% by weight 1,3-butadiene units and 60-95% by weight styrene units, and the use of said composition in the preparation of transparent films which may be used in packaging.

11. Ishii discloses a heat-sealing film having a sealant layer comprising a) a styrene-type hydrocarbon-diene block copolymer containing 50-95% by weight of the styrene-type hydrocarbon, b) an ethylene/ α -olefin random copolymer, and c) a styrene-type hydrocarbon-diene block copolymer containing 10-50% by weight of the styrene-type hydrocarbon (abstract), and d) an impact-resistant polystyrene. Example 4 of Ishii (page 11, line 24 to page 12, line 11; page 14, Table 1) comprises a) 45% by weight of a styrene/butadiene block copolymer containing 80% styrene and 20% butadiene, corresponding to the styrene/butadiene copolymer of the instant claims (claims 8, 9, 13, and 19); b) 45% by weight of an ethylene/1-butene copolymer prepared via a homogeneous catalyst, corresponding to the ethylene polymer of the instant claims (claims 8, 10 and 11); and c) 10% by weight of a styrene/butadiene copolymer containing 40% by weight styrene and 60% by weight butadiene. Furthermore, as Ishii discloses that the polymer composition may comprise 5-50% component (a), the examiner takes the position that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the composition of Example 4 to

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comprise 50% by weight (claim 20) of component (a) rather than 45%, with the reasonable expectation of obtaining a polymer composition which would be used in a heat sealing film. The examiner notes that the applicant discloses that K RESIN ® block copolymers are suitable for use as the styrene-butadiene block copolymer of the instant application, indicating that the styrene and butadiene contents of the commercial polymer would fall within the ranges recited in the instant claims and would therefore be similar to composition of the copolymer of Ishii. As noted on the product data sheet for K RESIN ® DK11, this commercial copolymer had a haze of 2% and a light transmittance of 94%. As it was known in the art that styrene-butadiene copolymers of this composition were characterized by these traits, the examiner takes the position that one of ordinary skill in the art would reasonably expect the styrene-butadiene block copolymer of the composition of Ishii to have the same optical properties (claims 14, 24, and 25).

12. The blend disclosed by Ishii is processed via coextrusion by a T-die method to produce a heat-sealing film (Page 12, lines 12-16) that is readily openable (page 2, lines 16-18) (claims 16, 26, and 27) and suitable for use as a cover film in packaging for electronics components (page 1, lines 4-11) (claim 17), and to have sufficient transparency so as to allow the contents of a package to be easily ascertained (Page 2, lines 19-23) (claim 18). The films are also characterized by their peel strength, which is related to the “readily openable property” (Page 13, line 15 to Page 15, line 5; Page 14, Table 2). As it is related to peel strength, the examiner takes the position that said readily openable property is therefore equivalent to applicant’s recitation that the film is

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“peelable.” Said heat sealing film may be used with polystyrene type packaging (Page 13, lines 15-190 (claim 19). Ishii does not teach the use of the films in food packaging, however, the examiner notes that the product data sheet for K RESIN ® discloses that the commercial polymer is suitable for use in barrier films and produce packaging.

13. The examiner notes that, as Ishii discloses 1-hexene (claims 11 and 12) as a suitable comonomer for the polymerization of the ethylene/ α -olefin copolymer (Page 4, lines 10-11), it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the 1-butene of the cited examples with 1-hexene, with the reasonable expectation of producing a polymer composition that could be used for the production of a heat-sealing film.

14. While Ishii discloses the use of an ethylene polymer produced via use of a homogeneous catalyst, Ishii does not specify the use of a metallocene or bridged metallocene catalyst.

15. Marechal discloses the production of polyethylene suitable for use in shrink films and optical films for food packaging (§§0035) which are produced via the use of a bridged metallocene catalyst. Specifically, Marechal discloses the use of ethylene bis (4, 5, 6, 7-tetrahydro-1-indenyl) zirconium dichloride for the polymerization of a low density polyethylene (§§0037) which was found to have superior extrusion stability to other commercially available films (§§0066, Table IX) (claim 15). The examiner notes that, in paragraph §§0043 of the instant application, the applicant recites the use of ethylene bis (4, 5, 6, 7- tetrahydro-1-indenyl) zirconium dichloride as a preferred bridged metallocene catalyst. As both Ishii and Marechal are directed to the use of ethylene

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polymers in the production of packaging films via extrusion, the examiner takes the position that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the composition of Ishii by substituting a bridged metallocene-catalyzed ethylene polymer for the Toughmer A ethylene/1-butene copolymer used in the composition of Example 4 of Ishii, for the purposes of preparing a polymer composition having improved extrusion stability. Furthermore, as it was known in the art that both styrene/butadiene block copolymers and metallocene catalyzed ethylene polymers were useful in films for food packaging applications, the examiner takes the position that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Ishii by using the polymer resin to produce a heat-sealing film which is used as a cover film in a package containing food rather than an electronics component (claim 17).

16. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Ishii et al, WO 01/15897 in view of Marechal, EP1312624 and K RESIN ® DK11 as applied to claim 17 above, and further in view of Gusavage et al, EP0570222.

17. As discussed previously, the combination of Ishii, Marechal, and K RESIN ® DK11 renders obvious a composition comprising a metallocene-catalyzed ethylene polymer and a styrene-butadiene copolymer which may be used as a heat-sealing cover film for food packaging made from polystyrene. Example 4 of Ishii discloses a composition comprising 45% by weight of a styrene/butadiene block copolymer and

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45% by weight of an ethylene copolymer (claim 22). Furthermore, as Ishii discloses that the compositions of WO 01/15897 may comprise 5-50% by weight of the ethylene/ α -olefin copolymer (abstract), the examiner takes the position that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the composition of Example 4 to comprise 50% by weight of the ethylene copolymer (claim 23), with the reasonable expectation of obtaining a polymer film which would be suitable for use in preparing a heat sealing, readily openable film. Neither of the references discloses that the use of the films with a container made from polypropylene.

Gusavage discloses a food tray manufactured from a foamed polypropylene sheet which has a flexible barrier film comprising a layer of ethylene vinyl alcohol and a bonding layer (abstract). As taught by Gusavage, the use of polystyrene foams in the manufacturing of food packaging suffers from disadvantages such as the need for large amounts of hydrocarbon blowing agents such as chloro- and fluorohydrocarbons and low melting points that prevent polystyrene packaging from being used in a microwave oven (Page 3, lines 19-25). The food tray disclosed by Gusavage is molded from a polypropylene foam formed using CO₂ as a blowing agent, eliminating the use of hydrocarbon agents (Page 2, lines 51-54), and laminated with a barrier film which provides an oxygen barrier (page 2, lines 38-40). This tray is reported to be easily recyclable (Page 2, lines 30-31) and suitable for use in a microwave oven (Page 2, lines 34-35), and may have a second film adhered to the polypropylene (claims 6 and 7). The examiner therefore takes the position that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the packaging of

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Ishii by substituting the polystyrene packaging with a polypropylene tray as described by Gusavage, for the purposes of producing a food container which could be manufactured without the use of chemical blowing agents and which could be used in a microwave oven.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Lenihan whose telephone number is (571)270-5452. The examiner can normally be reached on Mon-Thurs: 7:30-5:00, every other Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Irina S. Zemel/
Primary Examiner, Art Unit 1796

Jeffrey Lenihan
Examiner
Art Unit 1796

/JL/